

[4910-13-U]

## DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [66 FR 20380 4/23/2001]

[Docket No. 2000-NM-295-AD; Amendment 39-12184; AD 2001-08-07]

RIN 2120-AA64

Airworthiness Directives; Boeing Model 737-200 and -300 Series Airplanes Equipped with a Main Deck Cargo Door Installed in Accordance with Supplemental Type Certificate (STC) SA2969SO

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

**SUMMARY:** This amendment supersedes an existing airworthiness directive (AD), applicable to certain Boeing Model 737-200 and -300 series airplanes, that currently requires a one-time inspection to detect cracks of the lower frames and reinforcing angles of the main deck cargo door where the door latch fittings attach between certain fuselage stations and water lines, and replacement of any cracked part with a new part having the same part number. That AD was prompted by reports that, during the inspections required by the existing AD, cracks were found in the reinforcing angles of the main deck cargo door frame. This amendment requires, among other actions, an inspection to detect cracks of the lower frames and reinforcing angles of the main deck cargo door; replacement of any lower frame or reinforcing angle of the main deck cargo door when it has reached its maximum life limit. The actions specified by this AD are intended to detect and correct cracking of the lower portion of the main deck cargo door frames, which could result in sudden depressurization, loss or opening of the main deck cargo door during flight, and loss of control of the airplane.

**DATES:** Effective May 29, 2001.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of May 29, 2001.

**ADDRESSES:** The service information referenced in this AD may be obtained from Pemco World Air Services, 100 Pemco Drive, Dothan, AL 36303. This information may be examined at the Federal Aviation Administration (FAA), Transport Airplane Directorate, Rules Docket, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** William Culler, Aerospace Engineer, Airframe and Propulsion Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia 30337-2748, telephone (770) 703-6084; fax (770) 703-6097.

**SUPPLEMENTARY INFORMATION:** A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 2000-17-51, amendment 39-11877 (65 FR 51752, August 25, 2000), which is applicable to certain Boeing Model 737-200 and -300 series airplanes, was published in the **Federal Register** on October 17, 2000 (65 FR 61289). The action proposed to require, among other actions, an inspection to detect cracks of the lower frames and reinforcing angles of the main deck cargo door; replacement of any lower frame or reinforcing angle of the main deck cargo door when it has reached its maximum life limit.

## **Comments Received**

Interested persons have been afforded an opportunity to participate in the making of this amendment. Due consideration has been given to the comments received.

### **Request to Change Proposed High Frequency Eddy Current (HFEC) Inspections to Detailed Visual Inspections**

One commenter requests that, in lieu of the proposed repetitive HFEC inspections, repetitive detailed visual inspections with a borescope, flexiscope, or mirror and light be required every 600 flight cycles for cracks in the frames and, especially, in the reinforcing angles, provided that the initial inspection was an HFEC inspection of all lower frames and angles and all parts with crack indication were replaced with new parts. The commenter states that this change would alleviate the need to remove and reinstall the necessary hardware required to perform an adequate HFEC inspection, which causes an extended fleet downtime and damages the area being inspected. The commenter also states that it has reviewed statistical data from its fleet of airplanes on which HFEC inspections were done per AD 2000-17-51 that shows the number of cracked angles is higher than the number of cracked frames at the same frame station. Based on this data, the commenter provided a graph that shows a close correlation between cracked frames and attached angles.

The FAA does not agree. As indicated in the preamble of AD 2000-17-51, the special detailed visual inspection done per AD 2000-13-51 is not adequate to detect cracks embedded behind the reinforcing angles. In addition, previous reports from the commenter's fleet, and other operators, indicate that cracks could exist on a frame and remain hidden behind uncracked reinforcing angles. Therefore, we find that the required repetitive HFEC inspections are warranted to address the identified unsafe condition.

### **Request to Revise Wording of Paragraph (b)(2) of the Proposed AD**

One commenter requests that paragraph (b)(2) of the proposed AD be revised to “. . . replace the frames and associated angles which were not changed as per AD 2000-17-51 . . . Within 3,000 flight cycles after accomplishment of the replacement of parts as per 2000-NM-295-AD, do the HFEC inspection required of all the frames and associated angles.” The commenter states that revising “reinforcing angle” to “associated angle” is necessary, because the terminating action, which is being developed, relies on a new angle (reinforcing angle) located on top of the existing angle (associated angle of the frame).

The FAA does not agree. We find that adding the phrase “which were not changed per AD 2000-17-51” is unnecessary, because paragraph (b) of the final rule clearly identifies the affected airplanes as those “on which any door frame or reinforcing angle at the location where the door latch fittings attach between FS 361.86 and FS 298.12 and WL 202.35 and WL 213.00 has NOT been replaced before the effective date of this AD.” In addition, the header of paragraph (b) of the final rule is “Actions Addressing Door Frames or Reinforcing Angles That Have NOT Been Replaced.” We also find that adding the phrase “as per 2000-NM-295-AD” to the compliance time of “within 3,000 flight cycles after accomplishment of the replacement” is unnecessary and redundant as the “Compliance” section of this AD states, “Required as indicated, unless previously accomplished.” We note that the docket number associated with the preceding NPRM and this final rule is 2000-NM-295-AD. Furthermore, the term “reinforcing angle” is used in the design data and service documents of the original equipment manufacturer and in preceding AD's. Therefore, based on these conclusions, we find that no change is necessary to paragraph (b)(2) of the final rule.

### **Requests to Reference or Develop Terminating Action**

One commenter requests that the airplane manufacturer develop a terminating modification for the repetitive inspections required by the proposed AD. A second commenter requests that the proposed AD reference Pemco Service Bulletin 737-52-0036 as terminating action for the repetitive requirements of the proposed AD. A third commenter, Pemco, states that it is currently developing two terminating actions, and that they will be approved by a Designated Engineering Representative in November and December 2000. One commenter states that the proposed repetitive inspections requires removal and reinstallation of hardware, which can reduce fastener edge distance and

potentially cause damage to the inspected areas. The commenter also states that these inspections cause unscheduled downtimes up to four weeks per airplane.

The FAA agrees with the commenters that a terminating action is desirable. However, we do not agree with the commenters' concern that the required inspections and reinstallation of hardware may result in potential damage to the inspected area, since we anticipate that the terminating action will be available before the accomplishment of multiple inspections. We are aware that the affected Supplemental Type Certificate (STC) holder is developing service bulletin procedures to address the identified unsafe condition. However, the service bulletins are not scheduled to be completed until mid 2001. We have decided not to delay this action in anticipation of the service bulletins, since the release date is not absolute and this action is necessary to address an identified unsafe condition. Therefore, the FAA may approve requests for an alternative method of compliance (AMOC) under the provisions of paragraph (c) of this AD once the revised bulletins are issued. No change to the final rule is necessary.

### **Conclusion**

After careful review of the available data, including the comments noted above, the FAA has determined that air safety and the public interest require the adoption of the rule as proposed.

### **Cost Impact**

There are approximately 35 Model 737-200 and -300 series airplanes of the affected design in the worldwide fleet. The FAA estimates that 2 airplanes of U.S. registry will be affected by this AD.

It will take approximately 500 work hours per airplane to accomplish the inspection, at an average labor rate of \$60 per work hour. Based on these figures, the cost impact of the inspection required by this AD on U.S. operators is estimated to be \$60,000, or \$30,000 per airplane.

It will take approximately 128 work hours per airplane to accomplish the replacement, at an average labor rate of \$60 per work hour. Required parts will cost approximately \$15,521 per airplane. Based on these figures, the cost impact of the replacement required by this AD on U.S. operators is estimated to be \$46,402, or \$23,201 per airplane.

The cost impact figures discussed above are based on assumptions that no operator has yet accomplished any of the requirements of this AD action, and that no operator would accomplish those actions in the future if this AD were not adopted. The cost impact figures discussed in AD rulemaking actions represent only the time necessary to perform the specific actions actually required by the AD. These figures typically do not include incidental costs, such as the time required to gain access and close up, planning time, or time necessitated by other administrative actions.

### **Regulatory Impact**

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

## PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### § 39.13 [Amended]

2. Section 39.13 is amended by removing amendment 39-11877 (65 FR 51752, August 25, 2000), and by adding a new airworthiness directive (AD), amendment 39-12184, to read as follows:

# AIRWORTHINESS DIRECTIVE



Aircraft Certification Service  
Washington, DC

U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "av-info.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2001-08-07 BOEING:** Amendment 39-12184. Docket 2000-NM-295-AD. Supersedes AD 2000-17-51, Amendment 39-11877.

Applicability: Model 737-200 and -300 series airplanes, equipped with a main deck cargo door installed in accordance with Supplemental Type Certificate (STC) SA2969SO; certificated in any category.

Note 1: This AD applies to each airplane identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For airplanes that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (c)(1) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To detect and correct cracking of the lower portion of the main deck cargo door frames, which could result in sudden depressurization, loss or opening of the main deck cargo door during flight, and loss of control of the airplane, accomplish the following:

## **Actions Addressing Door Frames or Reinforcing Angles That Have Been Replaced**

(a) For airplanes on which any door frame or reinforcing angle at the location where the door latch fittings attach between fuselage station (FS) 361.86 and FS 298.12 and water line (WL) 202.35 and WL 213.00 has been replaced before the effective date of this AD: Do the actions specified in paragraphs (a)(1) and (a)(2) of this AD per the Accomplishment Instructions of Pemco Service Bulletin 737-52-0037, Revision 2, dated September 13, 2000, including Attachment 1, dated August 10, 2000.

(1) Within 3,000 flight cycles after accomplishment of the replacement, do a high frequency eddy current (HFEC) inspection to detect cracks of the replaced lower frames or replaced reinforcing angles of the main deck cargo door, as applicable.

(i) If no crack is detected, repeat the HFEC inspection thereafter at intervals of 1,300 flight cycles on the replaced part.

(ii) If any crack is detected, before further flight, replace the cracked part with a new part having the same part number per the service bulletin. Within 3,000 flight cycles after accomplishment of the replacement, do the HFEC inspection required by paragraph (a)(1) of this AD.

(2) Before or upon the accumulation of 7,000 total flight cycles on any lower frame or reinforcing angle of the main deck cargo door, replace the lower frame or reinforcing angle, as

applicable, with new parts. Within 3,000 flight cycles after accomplishment of the replacement, do the HFEC inspection required by paragraph (a)(1) of this AD.

### **Actions Addressing Door Frames or Reinforcing Angles That Have NOT Been Replaced**

(b) For airplanes on which any door frame or reinforcing angle at the location where the door latch fittings attach between FS 361.86 and FS 298.12 and WL 202.35 and WL 213.00 has NOT been replaced before the effective date of this AD: Within 1,300 flight cycles after accomplishment of the HFEC inspection required by AD 2000-17-51, amendment 39-11877, do the action specified in either paragraph (b)(1) or (b)(2) of this AD, as applicable, per the Accomplishment Instructions of Pemco Service Bulletin 737-52-0037, Revision 2, dated September 13, 2000, including Attachment 1, dated August 10, 2000.

(1) For airplanes that have accumulated less than 7,000 total flight cycles since installation of STC SA2969SO: Do an HFEC inspection to detect cracks of the lower frames and reinforcing angles of the main deck cargo door where the door latch fittings attach between FS 361.87 and FS 498.12 and WL 202.35 and WL 213.00.

(i) If no crack is detected, do the actions specified in paragraphs (b)(1)(i)(A) and (b)(1)(i)(B) of this AD.

(A) Repeat the HFEC inspection thereafter at intervals of 1,300 flight cycles on the airplane, but not to exceed the accumulation of 7,000 total flight cycles on the airplane.

(B) Before the accumulation of 7,000 total flight cycles on the airplane, replace the lower frame and reinforcing angle with new parts per the service bulletin. Within 3,000 flight cycles after accomplishment of the replacement, do the HFEC inspection required by paragraph (a)(1) of this AD.

(ii) If any crack is detected, before further flight, replace the cracked part with a new part having the same part number per the service bulletin. Within 3,000 flight cycles after accomplishment of the replacement, do the HFEC inspection required by paragraph (a)(1) of this AD.

(2) For airplanes that have accumulated 7,000 or more total flight cycles since installation of STC SA2969SO: Replace the lower frames and reinforcing angles with new parts. Within 3,000 flight cycles after accomplishment of the replacement, do the HFEC inspection required by paragraph (a)(1) of this AD.

### **Alternative Methods of Compliance**

(c) (1) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Atlanta Aircraft Certification Office (ACO), FAA. Operators shall submit their requests through an appropriate FAA Principal Maintenance Inspector, who may add comments and then send it to the Manager, Atlanta ACO.

Note 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Atlanta ACO.

(2) Alternative methods of compliance, approved previously in accordance with AD 2000-17-51, amendment 39-11877, are approved as alternative methods of compliance with the initial HFEC inspection required by paragraph (a)(1) of this AD.

### **Special Flight Permits**

(d) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the requirements of this AD can be accomplished.

### **Incorporation by Reference**

(e) The actions shall be done in accordance with Pemco Service Bulletin 737-52-0037, Revision 2, dated September 13, 2000, including Attachment 1, dated August 10, 2000, which contains the list of effective pages specified in Table 1 of this AD. Table 1 is as follows:

**Table 1.**

<b>Page Number</b>	<b>Revision Level Shown on Page</b>	<b>Date Shown on Page</b>
1	A	August 15, 2000
2, 3, 6-10	Original	August 10, 2000
4, 4a, 5	2	September 13, 2000
Attachment 1, 2	Original	August 10, 2000

This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Pemco World Air Services, 100 Pemco Drive, Dothan, AL 36303. Copies may be inspected at the FAA, Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington; or at the FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

### **Effective Date**

(f) This amendment becomes effective on May 29, 2001.

FOR FURTHER INFORMATION CONTACT: William Culler, Aerospace Engineer, Airframe and Propulsion Branch, ACE-117A, FAA, Atlanta Aircraft Certification Office, One Crown Center, 1895 Phoenix Boulevard, Suite 450, Atlanta, Georgia 30337-2748, telephone (770) 703-6084; fax (770) 703-6097.

Issued in Renton, Washington, on April 12, 2001.

Donald L. Riggin, Acting Manager, Transport Airplane Directorate, Aircraft Certification Service.